Curriculum Vitae

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Employment history

2018–Present: Lead Acoustic Data Analyst at Institute for Big Data Analytics, Dalhousie University
Development of analytical tools, software development, project management, supervision of junior staff and students, grant application writing, interdisciplinary communication

2015–2018: Assistant Professor at Department of Physics and Astronomy, Aarhus University
Research collaboration lead, project management, writing of research articles, research proposals, and grant applications, data analysis, laboratory work, technology development, teaching, student supervision, public outreach, academic duties

2013–2015: Postdoc at Department of Physics and Astronomy, Aarhus University
Writing of research articles, research proposals, and grant applications, data analysis, laboratory work, teaching, student supervision, public outreach

2010–2013: Postdoc at TRIUMF
Writing of research articles, research proposals, and grant applications, data analysis, laboratory work

University Education

2006–2010: PhD Physics, Aarhus University
- Thesis title: ^{8}B Neutrinos and ^{12}C Resonances
- Supervisors: H. Fynbo, K. Riisager
- Research stays: 7 months at CERN and 1 month at Tokyo Institute of Technology

2005–2006: Exchange programme, University of Washington

2002–2005: BSc Physics and Mathemathics, Aarhus University

Grants and Awards

2015: The Villum Foundation Young Investigator Programme, 580k**

2010: The Villum Foundation Postdoc Fellowship, 190k

2005: The Danish-American Fulbright Commission, 17k

2005: Nordea Danmark-fonden, 4.0k

2005: Faculty of Science, Aarhus University, 1.9k

2005: Etatsråd CG Filtenborg og Hustru Marie Filtenborgs Studielegat, 1.0k

2005: Observator mag.scient Julie Marie Vinter Hansens Rejselegat, 1.0k

2002: International Physics Olympiad Honorable Mention

**Grant size in CAD

Publications

33 peer-reviewed research articles (10 first authorships), 22 conference proceedings, 2 feature articles, and 1 software publication. 409 citations (321 without self citations), h-index of 10, and 7.87 citations per item.[1] A few key publications are listed below. For a complete list, see my ORCID profile at orcid.org/0000-0001-5843-7465.

O. S. Kirsebom, *et al.*, 2018. *First Accurate Normalization of the β-delayed α Decay of ^{16}N and Implications for the $^{12}C(\alpha,\gamma)^{16}O$ Astrophysical Reaction Rate*, Physical Review Letters **121**, 142701. Impact factor: 8.839, Citations: 0

[1] Source: Web of Science, 2018.11.20.

J. Refsgaard, O. S. Kirsebom, *et al.*, 2016. *Measurement of the branching ratio for β-delayed α decay of ^{16}N*, Physics Letters B **752**, 296–301. Impact factor: 4.254, Citations: 8

O. S. Kirsebom, *et al.*, 2012. *Improved Limit on Direct α Decay of the Hoyle State*, Physical Review Letters **108**, 202501. Impact factor: 8.839, Citations: 42

O. S. Kirsebom and B. Davids, 2011. *One fewer solution to the cosmological lithium problem*, Physical Review C **84**, 058801. Impact factor: 3.304, Citations: 32

O. S. Kirsebom, *et al.*, 2011. *Precise and accurate determination of ^{8}B decay spectrum*, Physical Review C **83**, 065802. Impact factor: 3.304, Citations: 16

O. S. Kirsebom, *et al.*, 2009. *Observation of γ-delayed 3α breakup of the 15.11 and 12.71 MeV states in ^{12}C*, Physics Letters B **680**, 44–49. Impact factor: 4.254, Citations: 21

Talks

Numerous (> 50) presentations at international conferences and workshops including several invited talks, which are listed below. For a complete list, see oliskir.github.io.

Observation of the ground state transition in the beta decay of ^{20}F
2018.05.24, 14th Nordic Meeting on Nuclear Physics, Longyearbyen, Svalbard

Electron capture on ^{20}Ne and the ultimate fate of stars in the mass range 8–10$M_{\odot}$
2016.12.06, 61st DAE-BRNS Symposium on Nuclear Physics, Saha Institute of Nuclear Physics, Kolkata, India

Experimental progress on clarifying the excitation spectrum of ^{12}C
2016.05.24, 11th International Conference on Clustering Aspects of Nuclear Structure and Dynamics, Napoli, Italy

Multi-particle decay studies
2015.04.16, 13th Nordic Meeting on Nuclear Physics, Saariselkä, Finland

A talk in two parts: I. Gamma rays from novae; II. New discoveries about the Hoyle state
2013.03.11, JINA Seminar, National Superconducting Cyclotron Laboratory, East Lansing MI, USA

^{12}C and the triple-alpha reaction rate
2012.10.27, 10th International Conference on Clustering Aspects of Nuclear Structure and Dynamics, Debrecen, Hungary

On the breakup of ^{12}C resonances into three alpha particles
2011.10.14, 6th Workshop on the Critical Stability of Quantum Few-Body Systems, Erice, Italy

Three-body decay: the case of $^{12}C \rightarrow 3\alpha$
2011.06.07, 4th International Conference on Proton-emitting Nuclei, Bordeaux, France

Experiment Proposals (Spokespersonships)

2016–Present: *A new probe of α-cluster structure in ^{12}C*, IPN-Orsay

2015–2018: *Search for the 2nd-forbidden ground-state transition in the β decay of ^{20}F*, JYFL

2015–2018: *Absolute measurement of the $\beta\alpha$ decay of ^{16}N*, ISOLDE

2012–2015: *β-delayed α-decay study of ^{16}N using the implantation method*, KVI

2011–2015: *Lifetime Measurement of the 7.786 MeV State in ^{23}Mg*, TRIUMF

Collaborators

Aarhus University, Denmark: Hans O. U. Fynbo, Karsten Riisager, and Aksel Jensen

CSIC, Spain: Olof Tengblad

JYFL, Finland: Anu Kankainen and Wladek Trzaska

TRIUMF, Canada: Martín Alcorta and Barry Davids

TU Darmstadt, Germany: Gabriel Martínez-Pinedo

Los Alamos National Laboratory, USA: Samuel Jones
University of York, UK: David G. Jenkins
NSCL, USA: Christopher Wrede
Université de Strasbourg: Sandrine Courtin

Teaching

2013–2017: Extracurricular programme for 1st-year students, Coordinator
2015: Nuclear astrophysics graduate course, Lecturer
2014: Electromagnetism laboratory course, Coordinator
2006–2010: Physics and mathematics undergraduate courses, Teaching Assistant

Supervision

2016–2017: Helle Bisgaard Sørensen, MSc Physics
2014–2015: Sofie Tilbæk Nielsen, BSc Physics

Referee for

Physics Review Letters, Physical Review C, Hyperfine Interactions.

Professional Memberships

2018–Present: Member of the Canadian Acoustical Association
2013–2018: Member of the Danish Physical Society